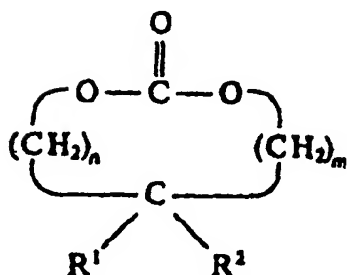


WHAT IS CLAIMED IS:

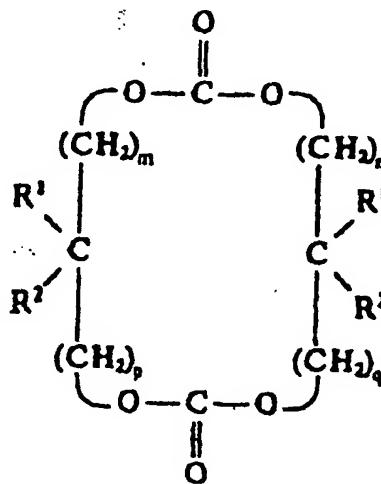
1. An aliphatic polycarbonate polymer produced by ring-opening polymerization of a cyclic carbonate in the presence of a DMC catalyst.

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2. The aliphatic polycarbonate polymer of Claim 1 in which the cyclic carbonate is represented by general formula (I) or (II)



(I)



(II)

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in which m, n, p and q, independently of one another, represent 0, 1, 2, 3, 4, 5 or 6 and

R¹ and R² represent H, a C<sub>1-6</sub> alkyl, a C<sub>3-6</sub> alkenyl, or a C<sub>1-6</sub> alk(en)oxy-C<sub>1-6</sub> alkyl group.

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3. The aliphatic polycarbonate polymer of Claim 1 in which the cyclic carbonate is neopentyl glycol carbonate.

4. The aliphatic polycarbonate polymer of Claim 1 in which the DMC catalyst used to produce the polymer contains zinc hexacyanocobaltate(III).
5. The aliphatic polycarbonate polymer of Claim 1 in which the DMC catalyst used to produce the polymer contains tert.-butanol.
6. The aliphatic polycarbonate polymer of Claim 1 in which the ring-opening polymerization is performed in the presence of one or more starter compounds exhibiting active hydrogen atoms.
7. A process for the production of a polyol comprising ring-opening a cyclic carbonate in the presence of a DMC catalyst.
8. A process for the production of a poly(ether-carbonate) polyol comprising
  - a) producing a polyether polyol by polyaddition of an epoxide to a starter compound exhibiting active hydrogen atoms in the presence of a DMC catalyst and
  - b) reacting the polyether polyol containing the active DMC catalyst with a cyclic carbonate under conditions such that ring-opening in the cyclic carbonate occurs.
9. The poly(ether-carbonate) polyol produced by the process of Claim 8.
10. A polyurethane produced by reacting the polyol of Claim 9 with an isocyanate.